A and L INTERIOR WOOD BLOCK FLOORS

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API INTERNATIONAL

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A and L
INTERIOR

WOOD BLOCK FLOORS

Ayer & Lord Tie Company
Incorporated
Railway Exchange Building
CHICAGO

BRANCH OFFICES

NEW YORK, N. Y.
2 Rector St.

DETROIT, MICH.
712 Hammond Bldg.

CLEVELAND, O.
1023 Illuminating Bldg.

PHILADELPHIA, PA.
909 Land Title Bldg.

KANSAS CITY, MO.
1117 Rialto Bldg.

MEMPHIS, TENN.
1402 Exchange Bldg.

Introductory

THE use of wood for structural purposes dates back to the earliest history of the human race. It is more widely available, easier worked and possesses certain very valuable qualities in better proportion than any other building material.

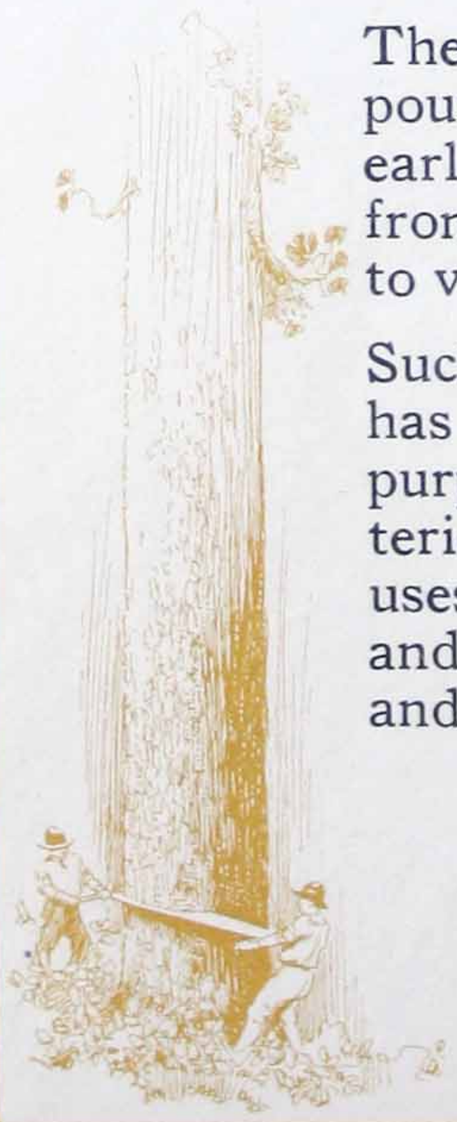
Like all vegetable substances timber is subject to decay, but the present development of the art of wood preservation has successfully overcome this defect through the perfection of a treatment by which all moisture necessary to the growth of destructive organisms is excluded.

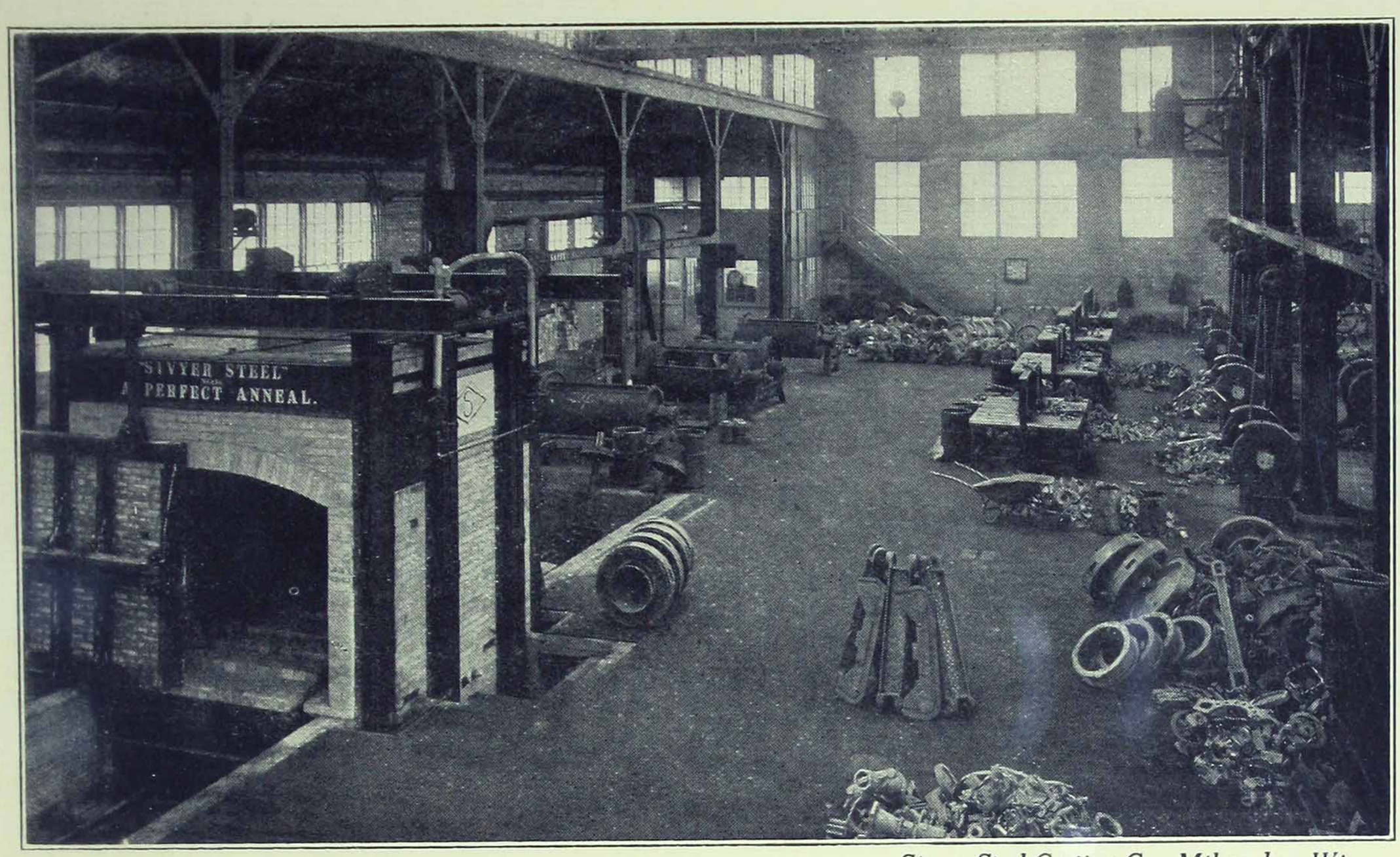
Proof of the almost indefinite durability of wood when it is kept dry is furnished by an Egyptian coffin now in the Metropolitan Museum of Art, New York. This coffin is credited with being nearly 4,000 years old, and the wood, although it shows no evidence of any special treatment, is in almost perfect preservation today.

The early Greeks and Romans endeavored to prevent decay by painting timber with essential oils. Another ancient method was by charring, which gave the wood a protective coat of charcoal that is not subject to attack by destructive fungi. We are also familiar with many instances of purely natural preservation through petrifaction, which is simply impregnation of the wood cells with a mineral solution that solidifies within them.

The modern method of injection of preservative compounds was first attempted about 200 years ago. The earliest patent for what is known as "Kyanizing" dates from 1832, and since that time much study has been given to various processes.

Such success has been met with in recent years that timber has not only been reinstated in favor for many structural purposes, from which it had been ousted by other materials that promised greater permanency, but many new uses have been found for it. One of the most important and highly satisfactory of these is in blocks for factory and industrial floors.





Sivyer Steel Casting Co., Milwaukee, Wis.

We are very much pleased with the results obtained in the use of the wood block floor and find that material can be handled much more easily and economically with this floor. We have at different times tried out various materials for flooring in our cleaning room but your wood blocks have proven to be the most satisfactory material that we have used.

SIVYER STEEL CASTING CO.
C. R. Messinger, Vice-President.

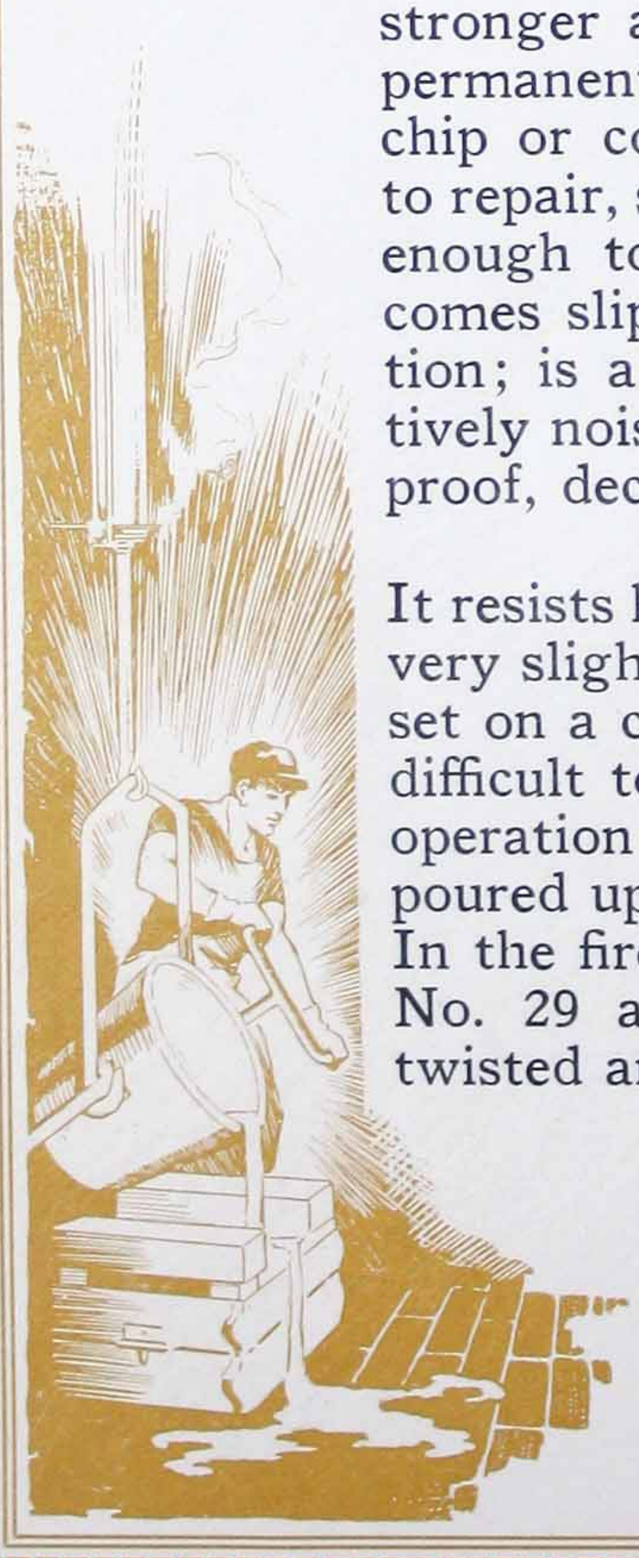
"Your wood blocks have proven to be the most satisfactory material that we have used."

A and L INTERIOR

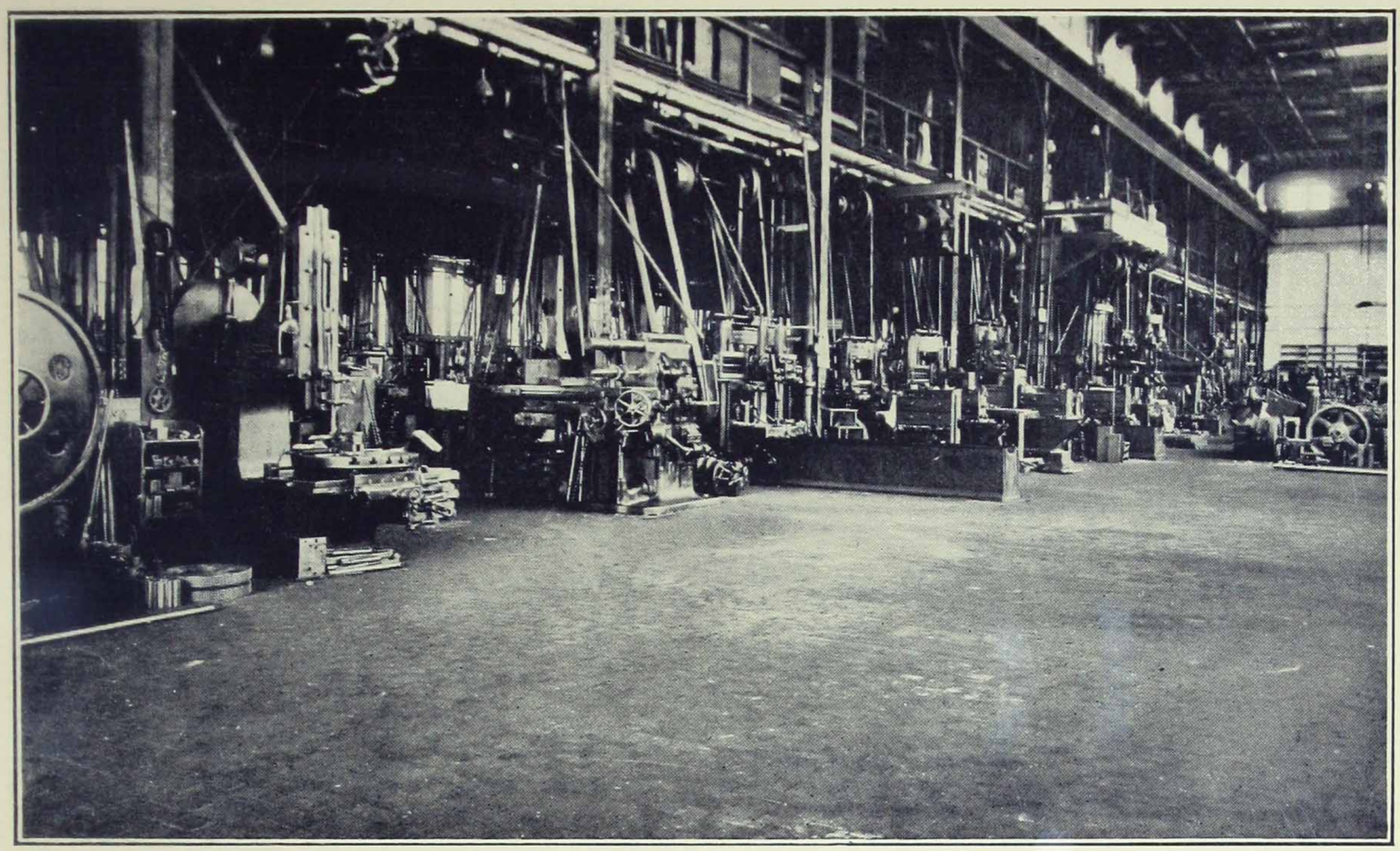
WOOD BLOCK FLOORS

IN A and L Creosoted Wood Blocks there are to be found combined more of the essential requirements of a good general purpose, heavy service floor than any other kind of flooring material can show. Although the first cost of this wood block floor is higher than some other types, maintenance cost is almost negligible by comparison because of its great durability, while it makes many economies possible in plant operation.

Its resistance to wear is astonishing. Under the extremes of load and heavy traffic the ends of the wood fibre iron out smoothly to form a surface that grows stronger and more compact with use; a surface that is permanently level and does not abrade, crack, crumble, chip or corrugate. With all this it is the easiest floor to repair, should repairs be necessary. It is firm and hard enough to offer small rolling resistance, yet never becomes slippery or loses its resiliency. It absorbs vibration; is a non-conductor of heat and cold; is comparatively noiseless and does not originate dust. It is waterproof, decay-proof and vermin-proof.



It resists high temperature extraordinarily well and chars very slightly even when directly subjected to fire. When set on a concrete base a wood block floor is exceedingly difficult to burn. There have been instances in foundry operation of crucibles overturned and molten metal poured upon the blocks which showed but little damage. In the fire which completely destroyed the P. & R. Pier No. 29 at Philadelphia, Pa., the structural steel was twisted and warped, and after the wreckage was cleared

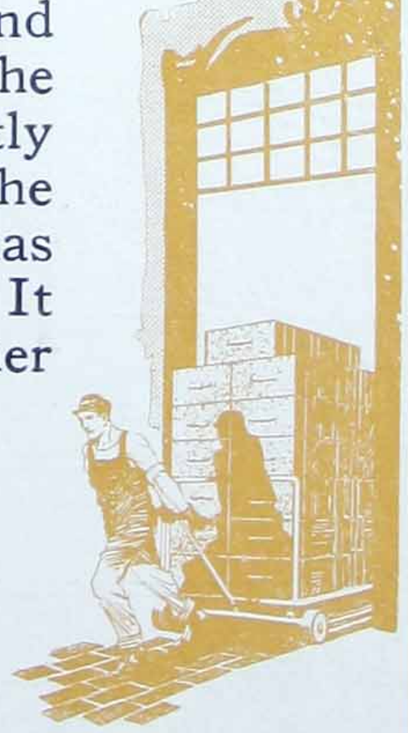


American Can Co., Maywood, Ill.

Mr. George L. Spence, District Superintendent, American Can Company, states that they were very well satisfied with the H and L WOOD BLOCK FLOOR. They test out all of their machines on this floor and the service is extremely severe, in spite of which it has stood up exceptionally well.

"It has stood up exceptionally well."

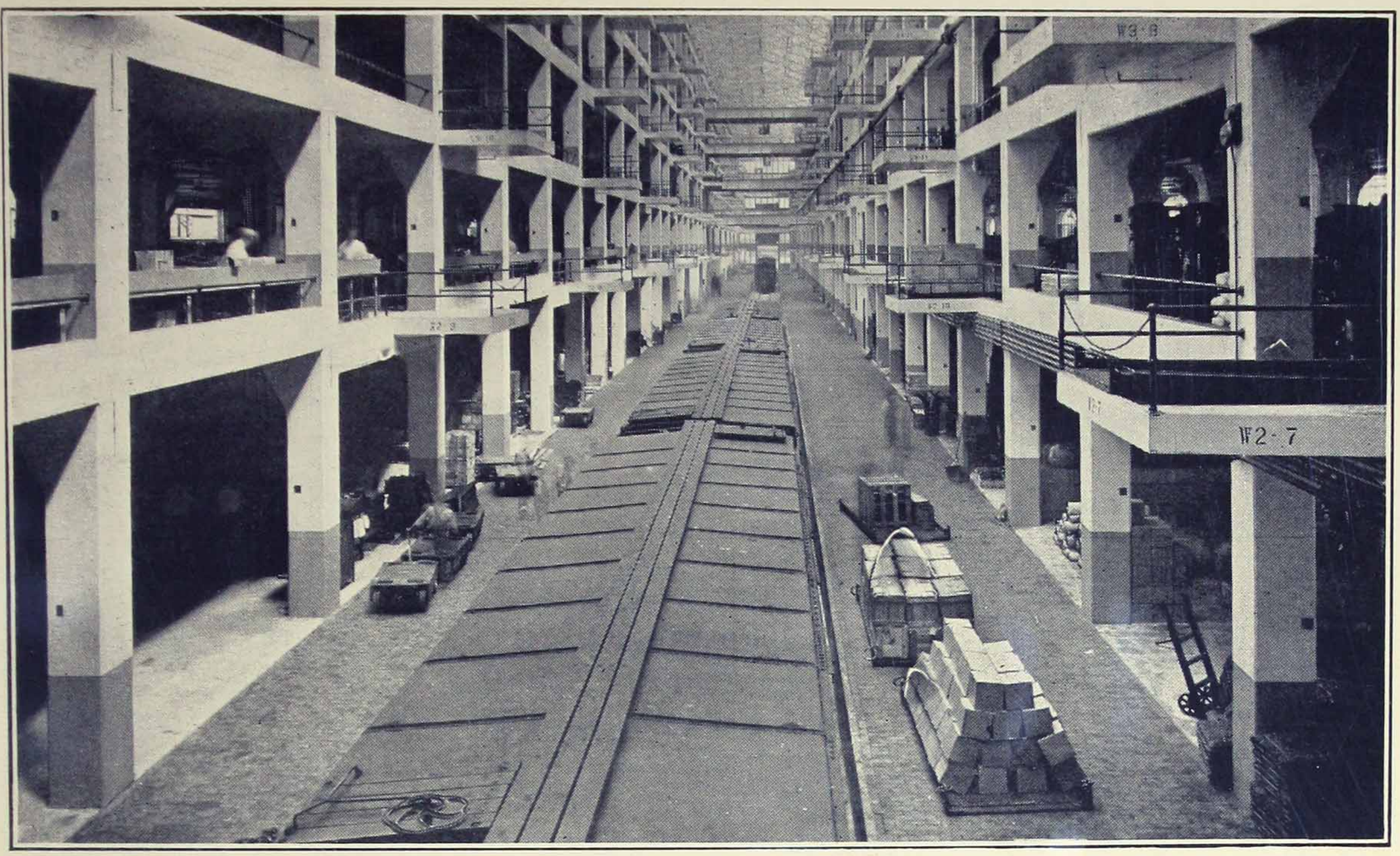
The use of these small units makes it a simple matter to take up any section of the floor to put down pipes, conduits or rails, or the foundations of heavy machinery and to relay it quickly again without any alteration of the floor level. Light machinery can be lag-screwed directly to the blocks, perfect stability being insured by the strength of the binding. No dressing of any kind has to be applied to any H and L Interior Wood Block Floor. It requires no treatment with hardening compounds or other



protective measures. The surface improves with use. H and L Interior Wood Block Floors can be laid on any story of a factory or mill building that will carry the proper base. Such an installation contributes very greatly to quiet, as the blocks take up the vibration of machinery and the rumble of truck wheels. Another advantage of this type of construction is found in the fact that these wood blocks may be used upon an old, wornout concrete floor, by filling up the holes and levelling it off. This provides a practically new floor at very small cost that will wear indefinitely.

The adaptability of H and L Interior Wood Block Floors makes them the most logical installation in

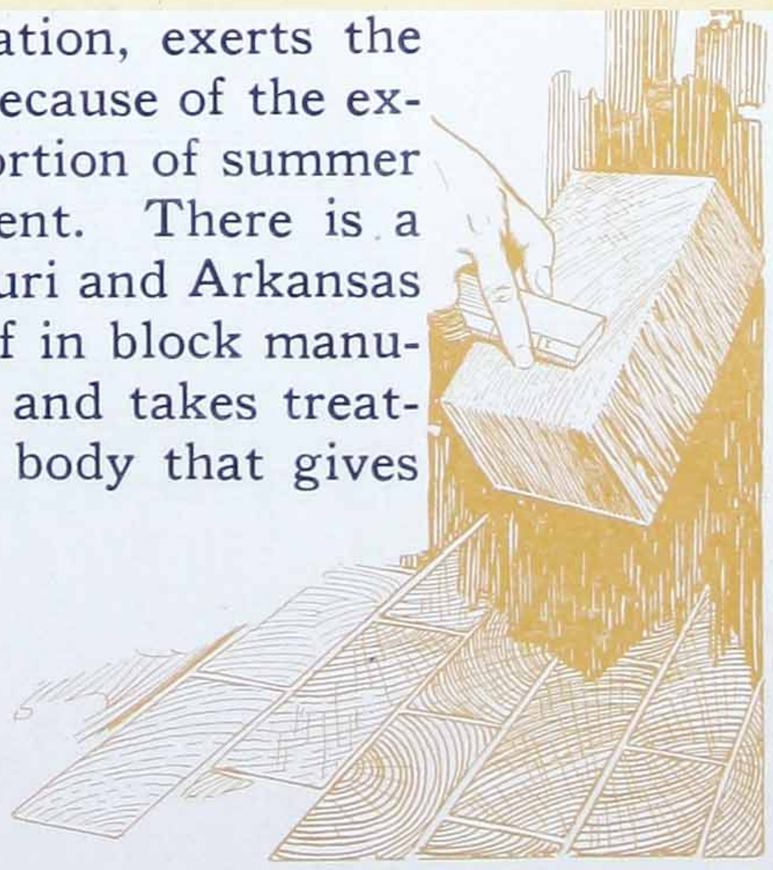
Machine Shops
Foundries
Factories
Railroad Shops and Round Houses
Freight Houses
Automobile Plants
Metal and Wood-working Plants
Rolling Mills
Rubber Factories
Warehouses
Bakeries
Barns
Breweries
Driveways
Express and Baggage Platforms
Fire Stations
Garages
Loading Platforms
Paper Mills
Printing Establishments
Railroad Stations and Platforms
Shoe Factories
Tanneries
Textile Mills



Ford Motor Car Co., Detroit, Mich.

The tremendous output of the Ford Company is attributable to the extraordinary efficiency of the manufacturing methods and equipment of the entire plant. H and L *INTERIOR WOOD BLOCKS are used for the flooring of this building because they facilitate trucking and handling of material, speed up operation and resist wear.*

American Railway Engineering Association, exerts the greatest resistance to end compression because of the extreme density of its fibre and high proportion of summer wood in which short-leaf pine is deficient. There is a species of Pine native in Southern Missouri and Arkansas that is largely substituted for Long-Leaf in block manufacture. It runs very close grain, clear and takes treatment readily, but does not contain the body that gives

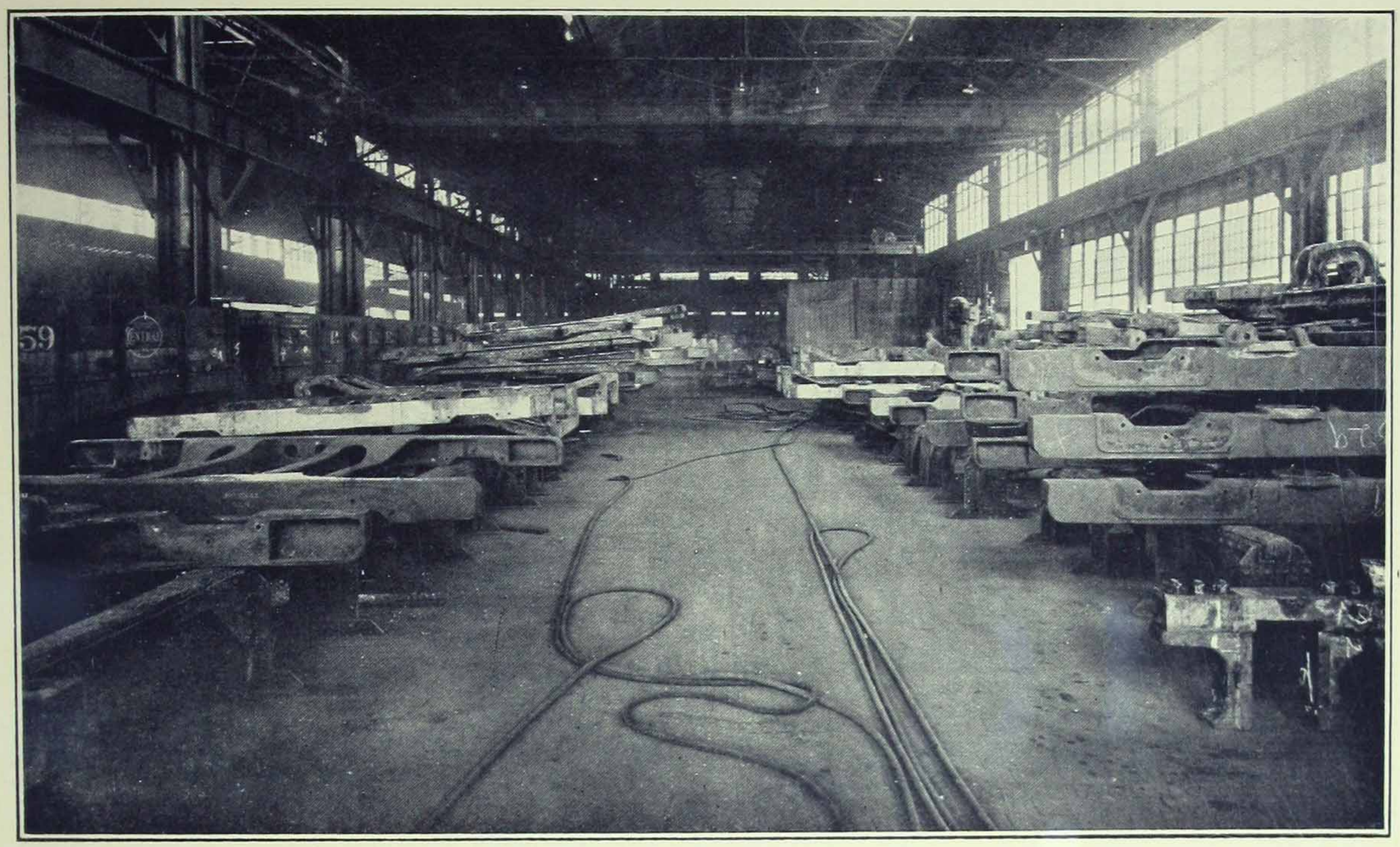


Long-Leaf its great resistance to end compression. The fact that it is close grained allows its substitution for Long-Leaf, but its lack of strength causes it to break up under loads in floor service.

A and L blocks are all sound, square-edged, free from bark, loose or rotten knots or any other defects detrimental to their strength and durability. Under the recent grading rules formulated by the National Forest Service, the American Society for Testing Materials and the Southern Pine Association, "dense" Southern Yellow Pine timber shall show an average of at least six annual rings per inch with one-third summer wood. *A and L* Blocks are required to show an average of not less than eight annual rings per inch and summer wood in due proportion. All these blocks are cut to uniform depth so that they can be laid on a smooth concrete base to form a level floor.

A and L Interior Blocks are all manufactured at plants located in Southern Mississippi, and Arkansas, where favorable seasoning weather prevails nine months out of the year. Material by test shows seasoning during each calendar month with the exception of part of December, January, February, and a part of March. This fact, coupled with our exceptionally large storage facilities, enables us to have all our timber properly air-dried, which condition is necessary in order to secure a rapid, thorough penetration of the wood cells in the creosoting process, which is approved in a recent Report of the Committee on Wood Preservation of the American Railway Engineering Association.

At plants located farther north, between the Ohio River and the Great Lakes, seasoning weather is reduced to three months out of the year. Weighing tests on block material yarded in southern Illinois, straight from cars, showed that after eight months of seasoning between September and May, the material gained in weight, indicating moisture absorbed during the winter, of approximately twenty per cent of the original green weight. In



Commonwealth Steel Co., Granite City, Ill.

During the past two years we have, as you know, paved with your creosoted wood blocks the floors of our Nos. 1 and 2 Finishing Buildings, Nos. 2 and 3 Transfer Buildings, and No. 2 Core Room Building, aggregating approximately 100,000 square feet.

Thus far our experience with these wood block floors has been satisfactory in every way, and we regard them as contributing a considerable factor toward safe, clean and efficient shop conditions.

As to the character of usage of such floors, we might add that over and upon them are handled, among other castings, our passenger car trucks and locomotive tender frames, ranging in weight up to 24,000 pounds.

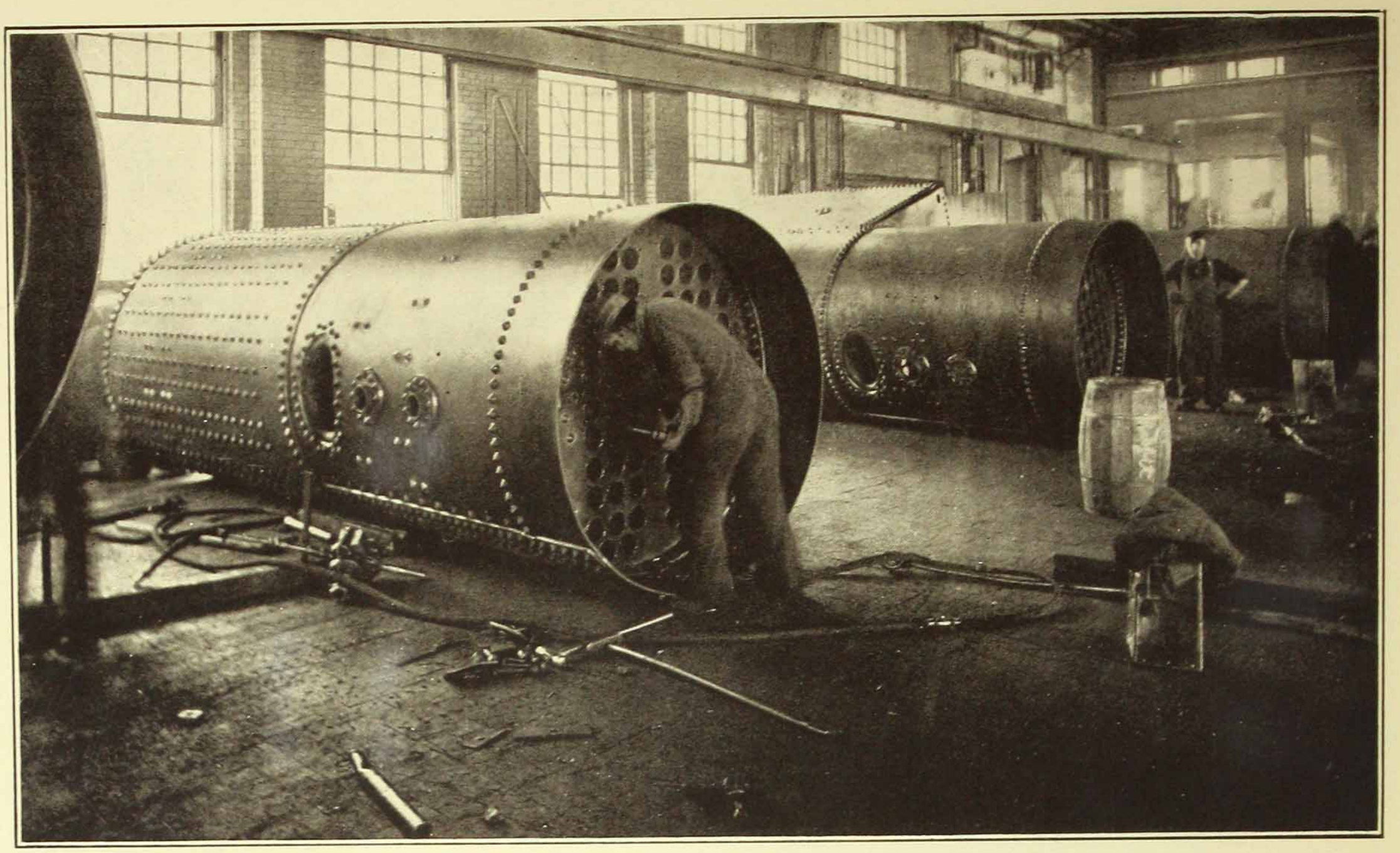
COMMONWEALTH STEEL CO.
Geo. K. Hoblitzelle,
Vice-President and Treas.

"We regard them as contributing a considerable factor toward safe, clean and efficient shop conditions."

able "bleeding."

To those unfamiliar with timber growths and treating practice, a treated block is a treated block, and degrees of excellence are generally judged by the blackness of the material.

Dead oil of coal tar, commonly known as Creosote, is the most perfect timber preservative known. It is dark

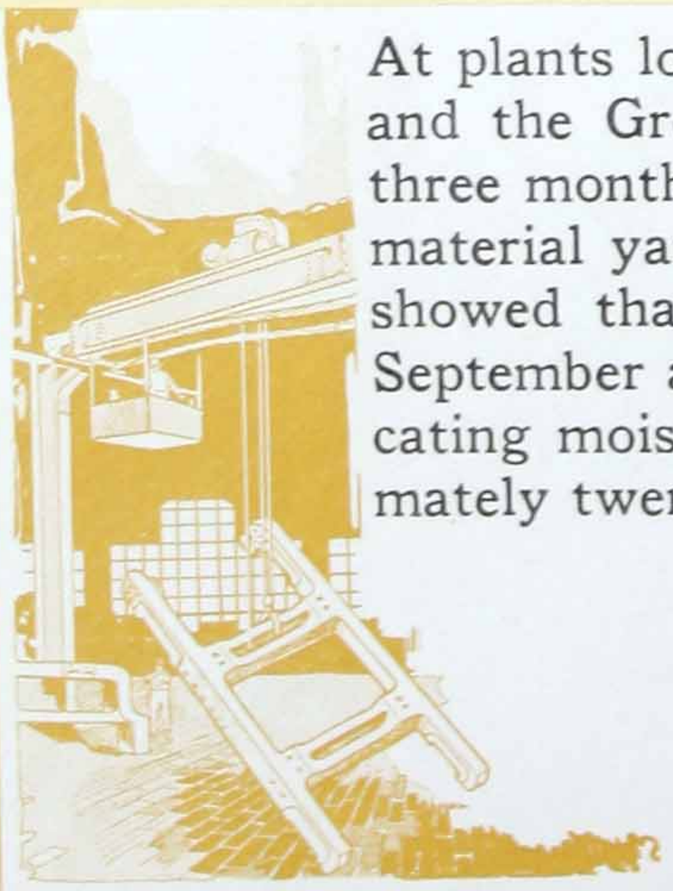


Kewanee Boiler Co., Kewanee, Ill.

In reply to your inquiry as to the service we are getting from the creosote block flooring which you placed in our boiler shop a year ago, we are very greatly pleased to advise you that it is the most satisfactory flooring that we have ever found for a boiler shop. We do not know of a manufacturing plant that is as hard on flooring as a boiler factory; as a matter of fact, we have tried a number of different kinds of floor.

KEWANEE BOILER COMPANY
M. F. Moore, Asst. to President.

"It is the most satisfactory flooring that we have ever found for a boiler shop."



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other words, material yarded north of the Ohio River in the middle of September and stacked in open piles for rapid seasoning, was reweighed in May and, instead of decreasing in weight and losing moisture, contained an excess that would prevent its use in the manufacture of blocks suitable for floor construction. Any lumber containing a large percentage of moisture does not take thorough or perfect penetration and shrinks unduly when laid under cover in a plant.

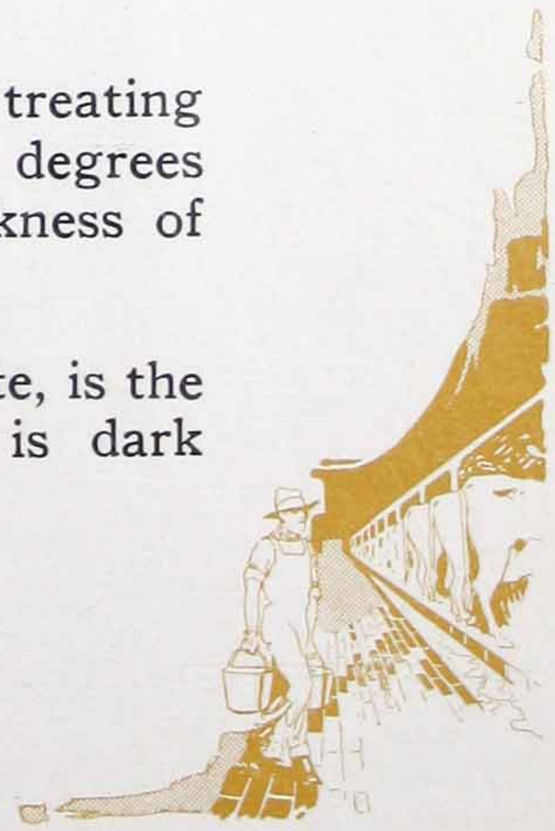
The Ayer & Lord Tie Company originated the use of the empty cell or Rueping treated block for floor construction, and the results everywhere attained by our floors bear witness to the fact that this is the proper method, and provides a block that will show a minimum of shrinkage when installed in a floor.

The Creosote used is a pure dead oil, a distillate of coal gas or coke oven tar, and is a product obtained only by distillation. It is entirely free from admixture of tar, tar oils, petroleum or any other product. Those, however, who are familiar with preserving methods, judge values by the quality of the preservative and the uniformity of the penetration secured.

Sufficient pressure is used to secure uniformly perfect penetration, making the blocks proof against decay and the harmful action of oils, acid, or alkali solutions and highly fire-resistant, but without diminishing the compressive strength of the wood in the slightest degree. This claim can not be made for some other coniferous woods. *A and L* Floors are completely free from objectionable "bleeding."

To those unfamiliar with timber growths and treating practice, a treated block is a treated block, and degrees of excellence are generally judged by the blackness of the material.

Dead oil of coal tar, commonly known as Creosote, is the most perfect timber preservative known. It is dark

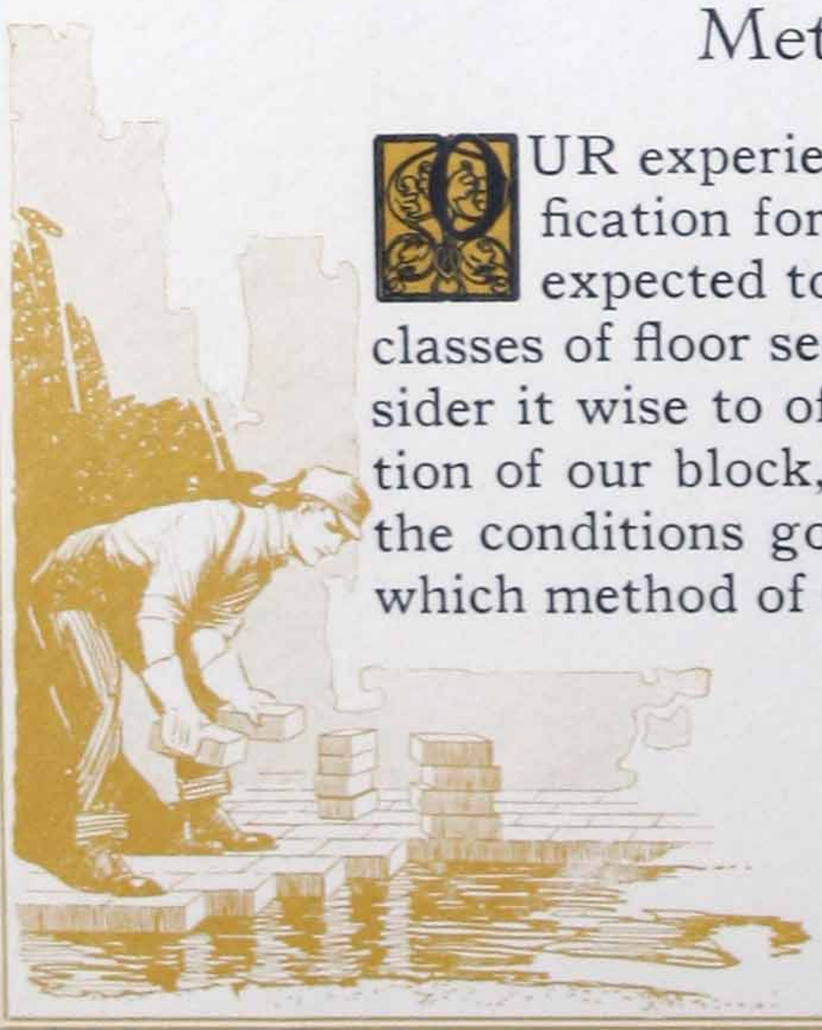


brown in color and while the outside appearance of the treated block may be called black, the wood fibres of a split block will show brown when a pure distillate oil is used, and invariably any tar mixture can be detected by the dark color or blackness of the wood fibres when an adulterated oil is used.

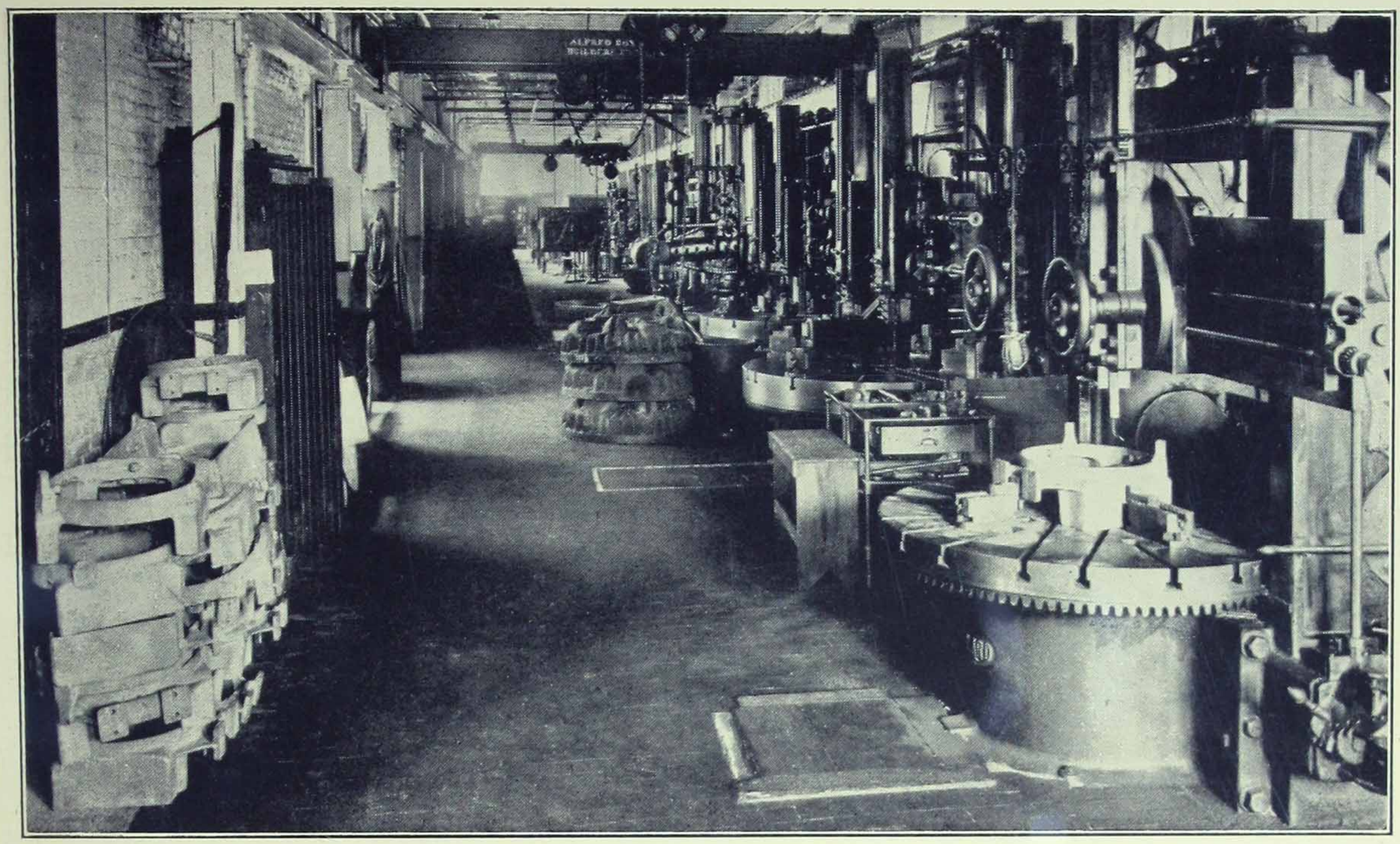
The use of the word Creosote is improperly applied to a long list of tar mixtures. Many are hidden under trade names that allow the use of any sort of mixture without disclosing its chemical properties. These trade names, when not properly applied to a pure distillate oil, cover and permit the use of inferior grades of coal tar or water gas tar. These latter products are of doubtful value in preservative treatment and their only virtue lies in their cheapness.

There is no reason why specifications covering the oil used in the treatment of blocks should not be openly published. As we have already said, there is no known coal tar preservative more effective than dead oil of coal tar (creosote). There is no secret in its manufacture; it is secured *only* by distillation. On the other hand, any tar mixture put out under a trade name intended to indicate that it is creosote when it is not, is a deception and an adulterated product. These are points well worth bearing in mind and are given as a protection to any prospective users of creosoted wood block floors.

Methods and Construction



OUR experience has taught us that no blanket specification for Wood Block Floor construction can be expected to give perfectly satisfactory results in all classes of floor service, and for this reason we do not consider it wise to offer a specification covering the installation of our block, unless we are sufficiently familiar with the conditions governing the service to satisfy ourselves which method of construction should be followed.

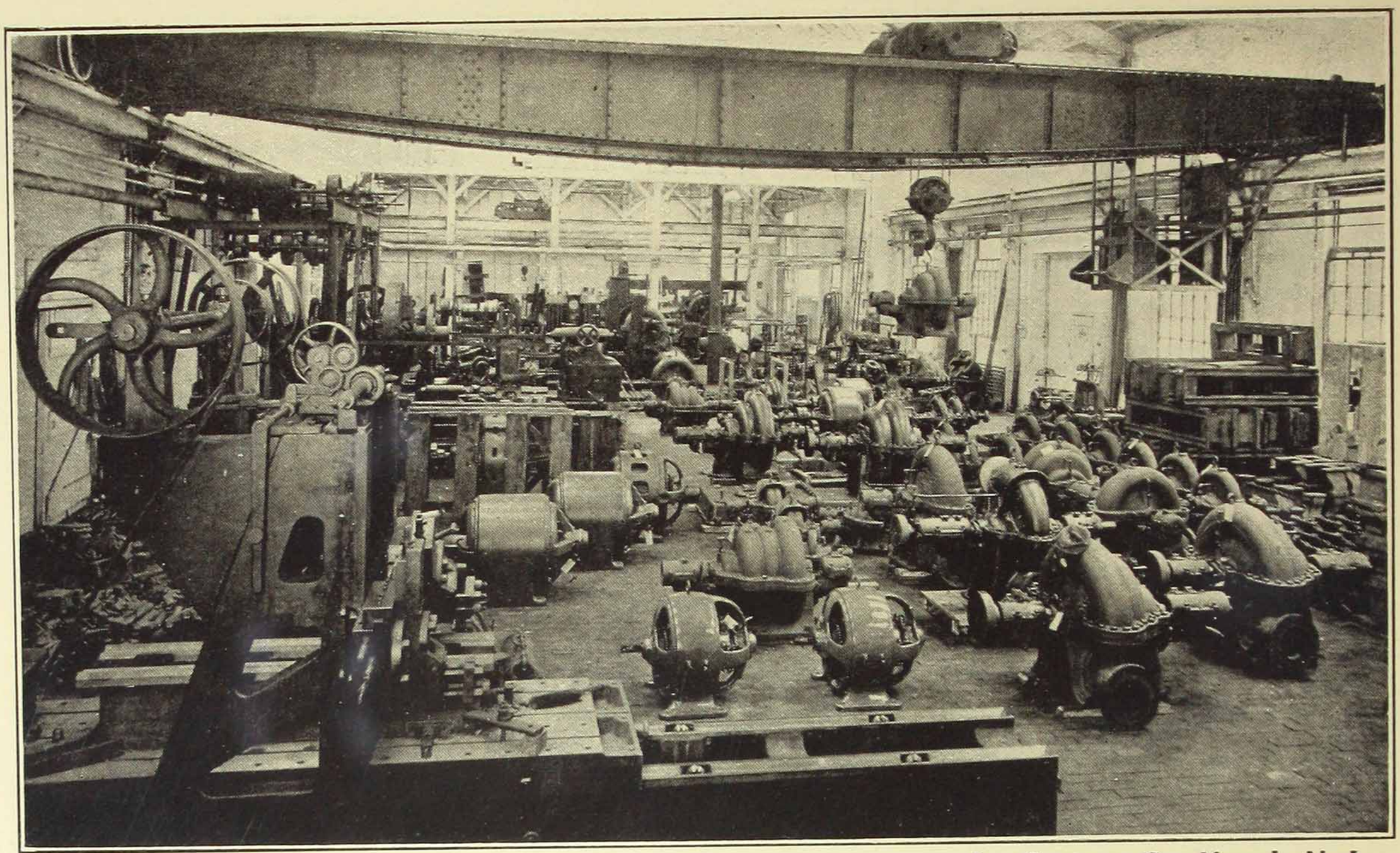


The Electric Controller & Mfg. Co., Cleveland, Ohio.

We are indeed glad to say that the Creosoted Wood Block floors furnished by you have proven perfectly satisfactory. The oldest have been down since 1912, and we see absolutely no evidence of wear or decay. We are so well pleased with this type of floor that we are putting 35,000 square feet of it in our new factory.

THE ELECTRIC CONTROLLER & MFG. CO.
F. W. Jessop, Works Manager.

"Have been down since 1912, and we see absolutely no evidence of wear or decay"

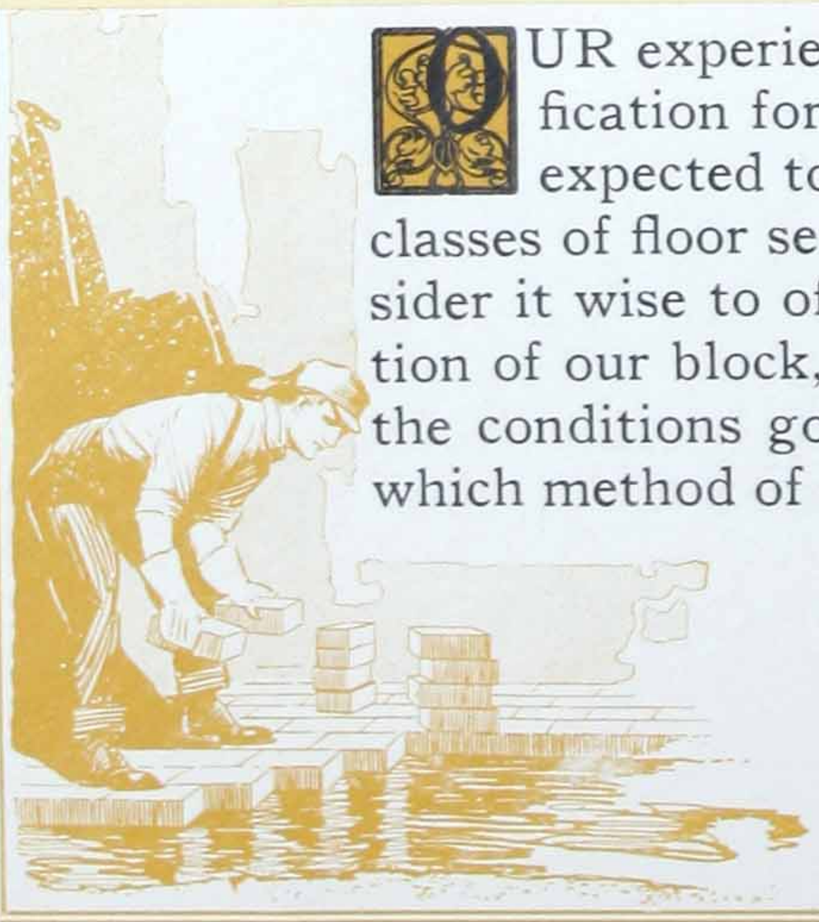


Lea-Courtenay Co., Newark, N. J.

The wood block floor which we put in our new erection shop about a year ago has fulfilled every expectation. It has stood up very well under rough usage and so far has not shown any signs of wear.
In case we are in the market for a floor for any future extensions, we will certainly consider this first on our list.

LEA-COURTENAY COMPANY
Albert G. Lea, President.

"It has stood up very well under rough usage and so far has not shown any signs of wear"



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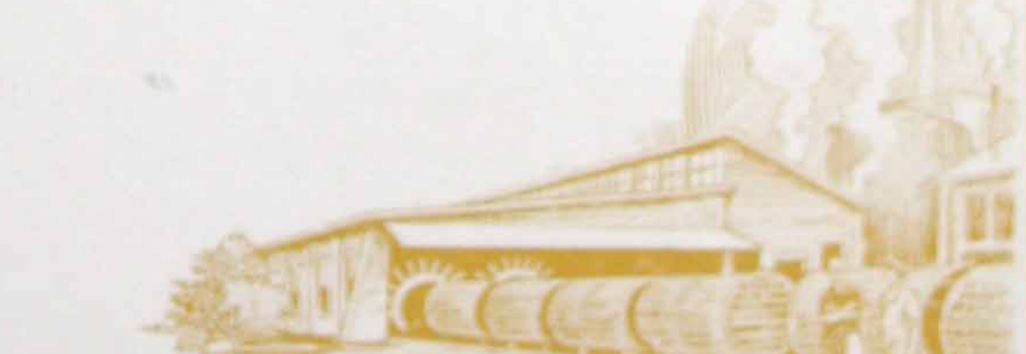
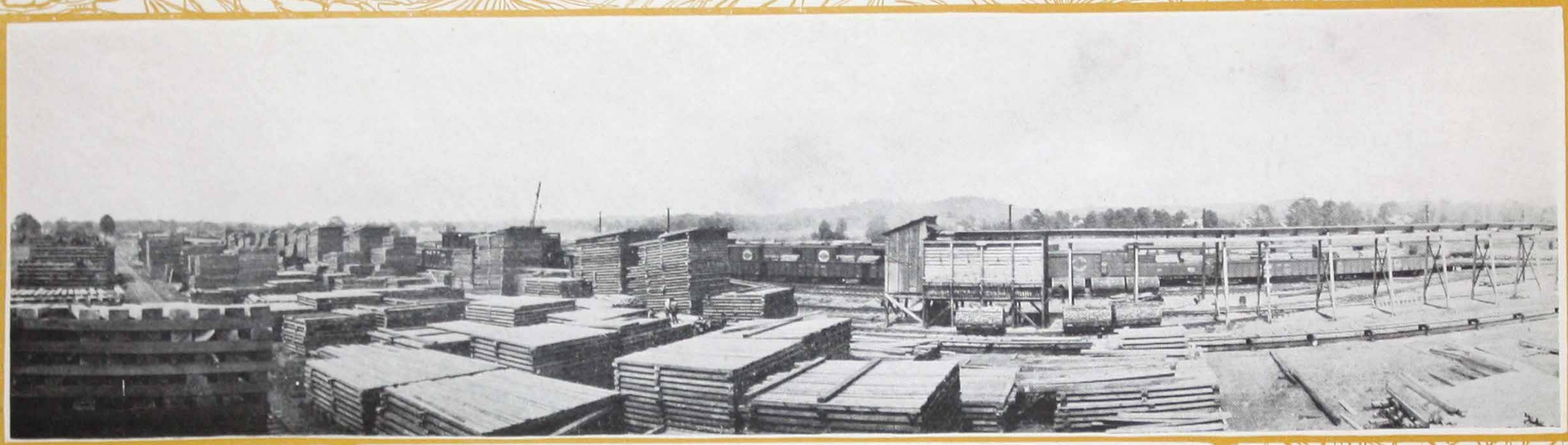
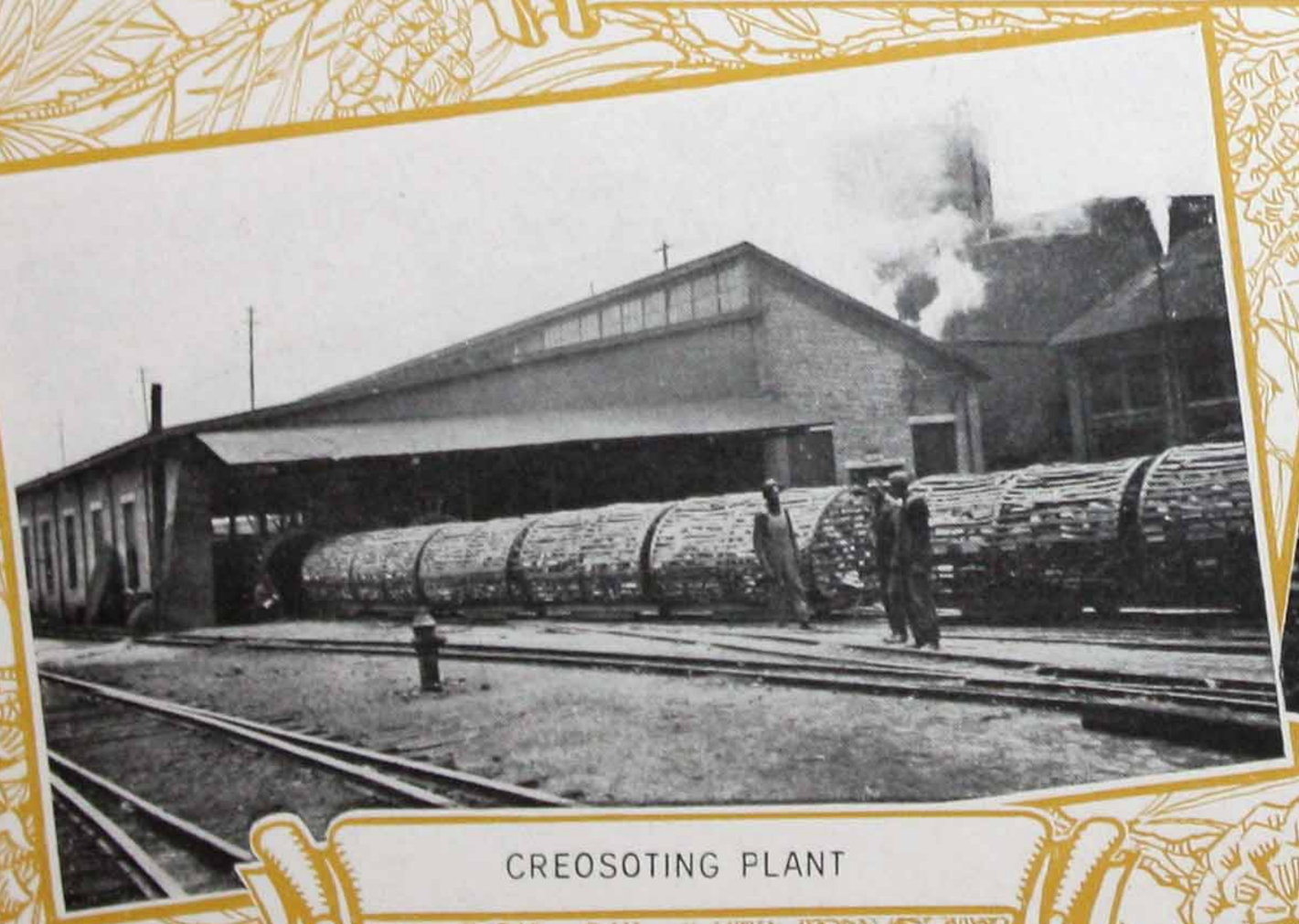
There are certain fixed principles in usual floor construction that hold good in ninety per cent of the wood block floors laid, but the other ten per cent offers enough variation in conditions to make it necessary that care should be exercised in recommending installation methods. This policy on the part of Ayer & Lord Tie Company has secured for users of A and L Interior Blocks perfect floor service and for us an unbroken record of perfect floor installations. In short it has become a by-word that an A and L Interior Wood Block Floor stands for faultless floors and indefinitely long service.

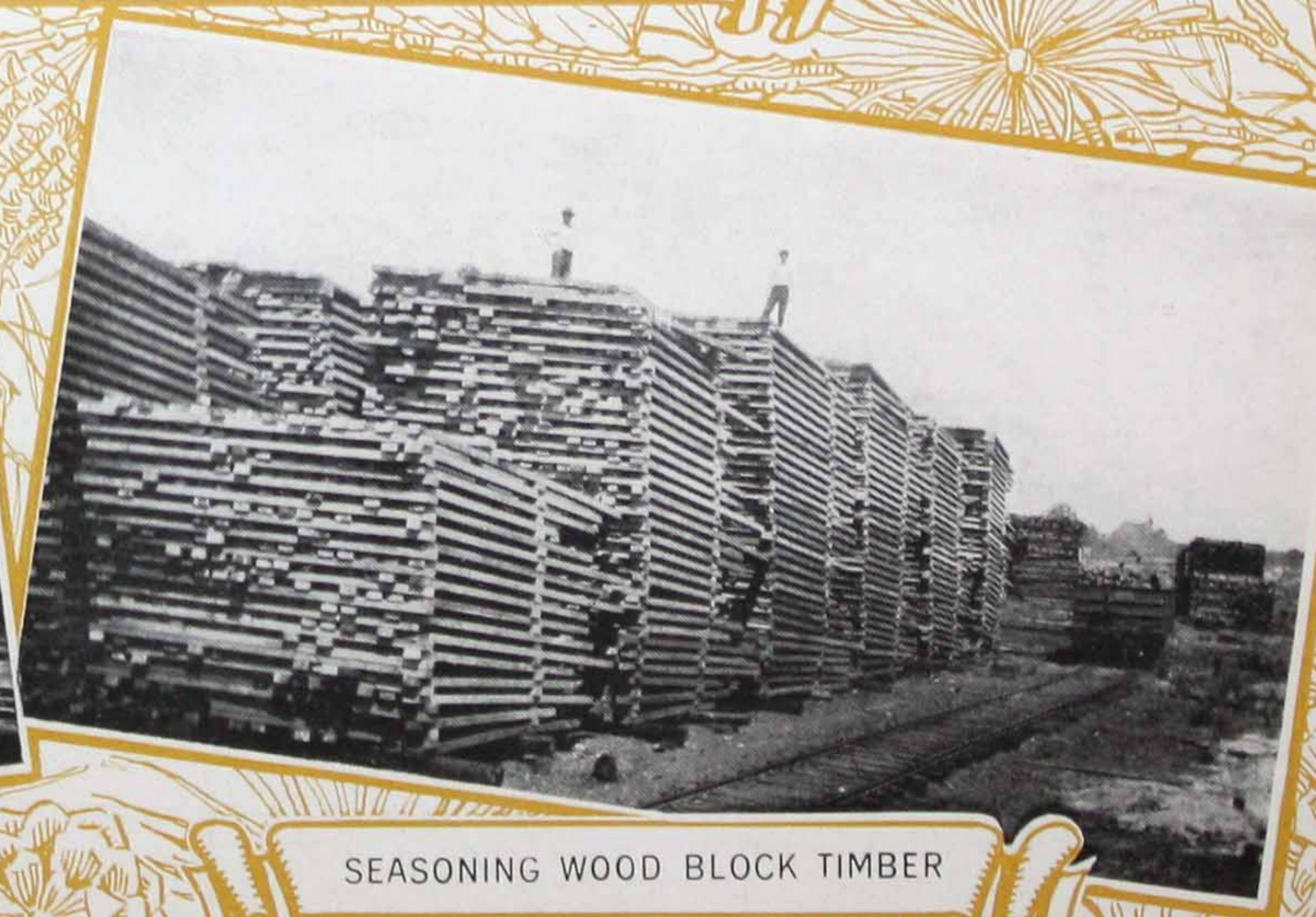




ONE OF THE AYER & LORD TIE COMPANY'S STORAGE YARDS



CREOSOTING PLANT



SEASONING WOOD BLOCK TIMBER